B23G

THREAD CUTTING; WORKING OF SCREWS, BOLT HEADS, OR NUTS, IN CONJUNCTION THEREWITH (making helical grooves by turning B23B5/48, by milling B23C3/32, by forging, pressing, or hammering B21K1/56, by grinding B24B19/02; arrangements for copying or controlling B23Q; thread forming by corrugating tubes B21D15/04, by rolling B21H3/02)

Definition statement

This subclass/group covers:

Thread cutting by chip removal.

Production of threads with no removal of chips by means of tools similar in form and manner of use to thread cutting tools.

Working of screws, bolt heads and nuts in conjunction with thread cutting.

References relevant to classification in this subclass

This subclass/group does not cover:

Thread forming by corrugating tubes	B21D 15/04
Making threaded elements by forging/hammering	B21K 1/26
Making nuts by forging or hammering	B21K 1/64
Making screwthreads by rolling	B21H 3/00
Turning helical grooves	B23B 5/48
Turning tools for threading	B23B 27/065
Milling helical grooves	B23C 3/32
Making gears (inc wormwheels)	B23F
Making milling cutters for threading	B23P 15/36
Making threading tools	B23P 15/48
Multi stage processes involving threading and also other operations classed in B23B, B23C, B23D, B23F, making particular items	B23P 23/00

Details of machine tools and accessories not related to the operation being performed including:	B23Q
- evacuation of swarf,	B23Q 11/0042
- guarding & protective coverings	B23Q 11/08
- conveying workpiece into and from machine	B23Q 7/00
- tool changing	B23Q 3/155
- measuring or sensing	B23Q 17/00
Adaptive control and/or computer controls for turning, boring or drilling processes	B23Q 15/00, G05B 15/02
Grinding helicoidal grooves	B24B 19/022
Fasteners per se	F16B

Special rules of classification within this subclass

Classification in this subclass is according to a literal interpretation of the group and subgroup headings.

Indexing Codes from the 200 series (i.e ICO codes from the following groups: B23G 2200/00 to B23G 2200/50, B23G 2210/00 to B23G 2210/48, B23G 2225/00 to B23G 2225/60 and B23G 2240/00 to B23G 2240/60) should be added to documents at every possible opportunity for deep indexing.

A ECLA mirror image ICO code scheme (i.e. B23G 1/00 to B23G 11/00) has recently been created. However, this scheme should NOT be used for classification of new documents.

At the end of this document drawings have been provided, which give examples of the items classified in the most widely used subgroups. The example drawings have each been taken from a document classified within the subgroup, for which the example is provided.

The term "similar in form and in manner of use to thread cutting tools" of B23G 7/00 should be strictly interpreted. The forming tool being used should bear a very close resemblance to known cutting tools. Examples of such tools are forming taps (roll taps), and forming tools resembling milling cutters and

used with a helical feed.

The term "in conjunction with thread cutting" in the title of group B23G 9/00 should be interpreted in a very strict and limited manner. Documents should only be classified in B23G 9/00 if the content refers to the mechanical working of the screw, bolt or nut. For example the coating of screwthreads should be classified either according to the fastener per se or according to the process being used.

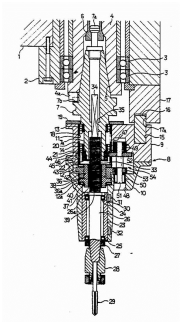
B23G 11/00 refers to feeding or discharging mechanisms in so far as they are specifically destined for thread cutting machines. B23Q 7/00 is used for feeding or discharging mechanisms in general.

ILLUSTRATIVE EXAMPLES

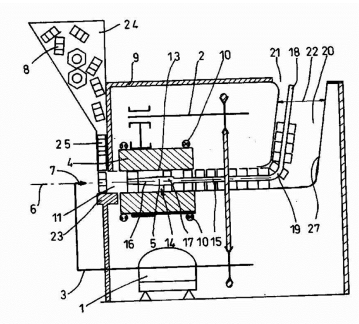
Notes:

None of the drawings is original and no copyright is claimed.

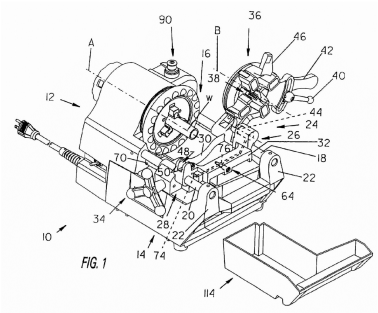
The majority of the drawings are each taken from a document classified in the group or subgroup, to which the example refers.



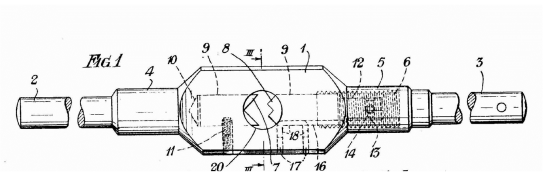
B23G1/16 Thread cutting by tapping



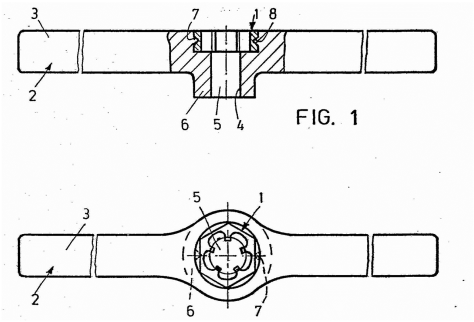
B23G1/18B Machine for tapping nuts with one working spindle (see also B23G9/00)



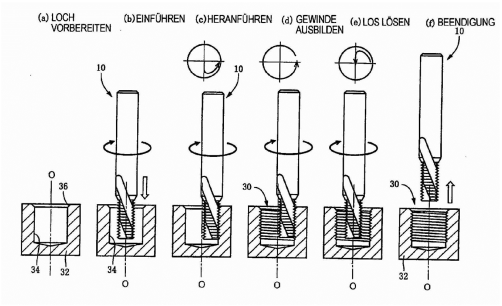
B23G1/22 and 1/24 Pipe threading machine (for accessories see B23G1/52)



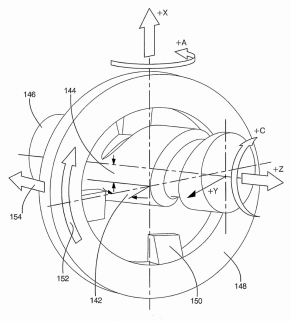
B23G1/26B1 Tap wrench



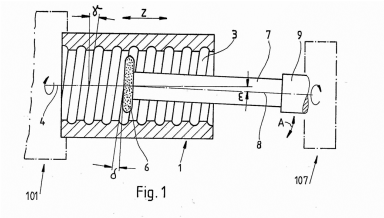
B23G1/26C2 Die wrench with guide (4)



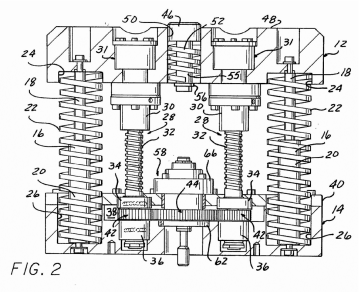
B23G1/32 Thread milling



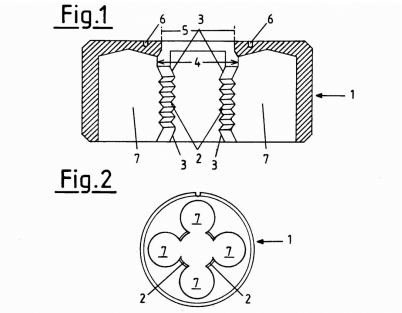
B23G1/34 Thread milling by whirling



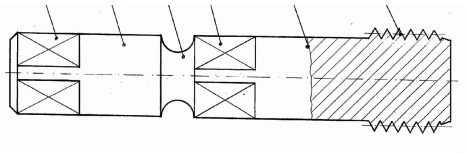
B23G1/36 Thread grinding



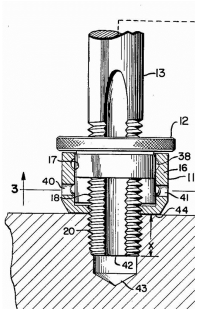
B23G3/00B device to allow threading on a press



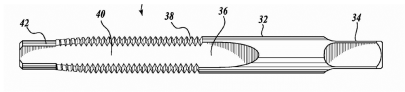
B23G5/04B threading die with guide (5)



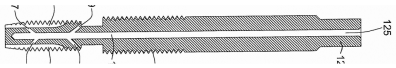
B23G5/06C & F Tap with weakened shank and means to remove broken tap



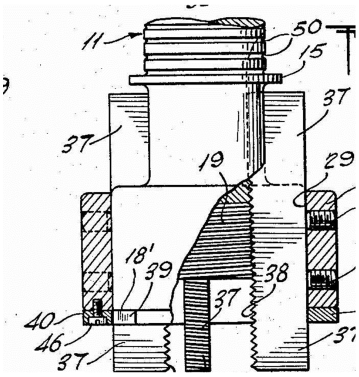
B23G5/06D Tap with stop



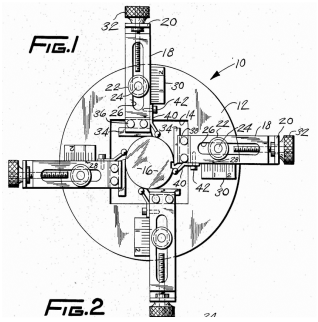
B23G5/06B tap with pilot (42)



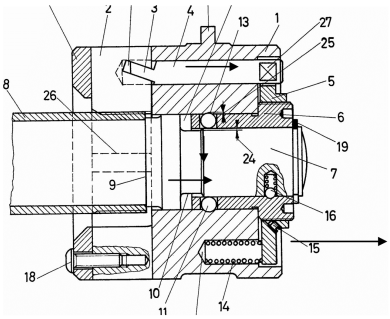
B23G5/00B and B23G5/06 Tap with multiple cutting sections and lubrication channel



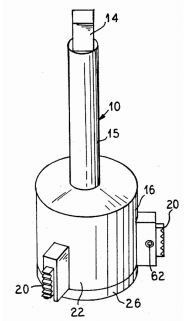
B23G5/10 Die head



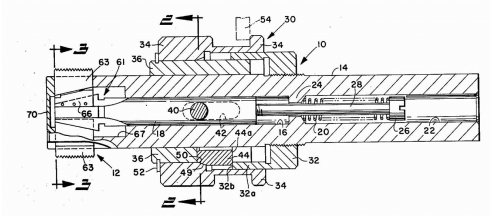
B23G5/08B Adjustable die (was L23G700/08B1)



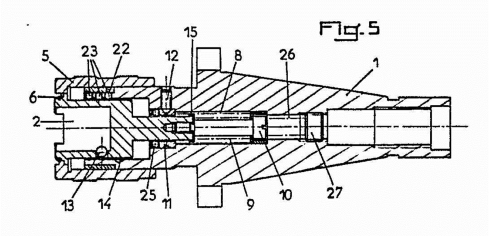
B23G5/12 Self -releasing die head



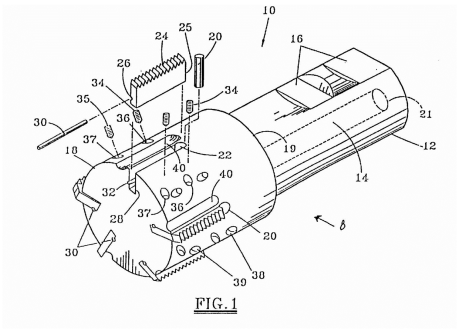
B23G5/14 Tapping head



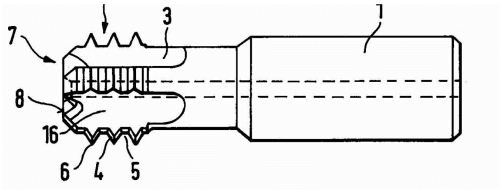
B23G5/16 Self-releasing (collapsible) tapping head. Note that many documents for this type of equipment are still in B23G5/14 with +IDT classification



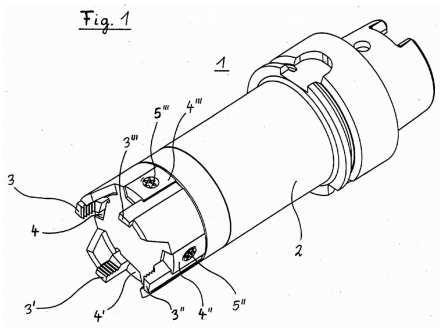
B23G5/14 contains tap holders such as this



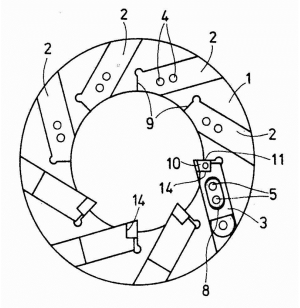
B23G5/18 Thread milling cutter with inserted cutting edges



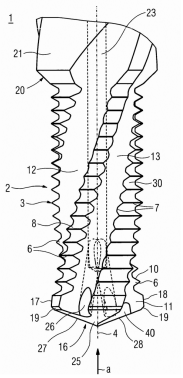
B23G5/18 Thread Milling Cutter



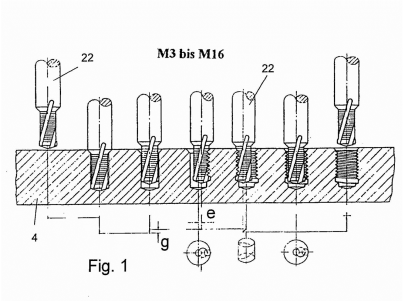
B23G5/18 thread milling cutter for external threads



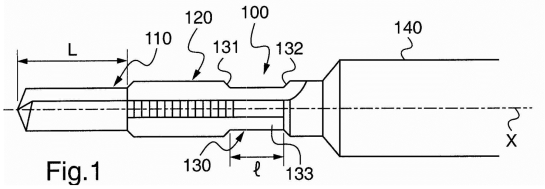
B23G5/18 Thread milling cutter for whirling threads



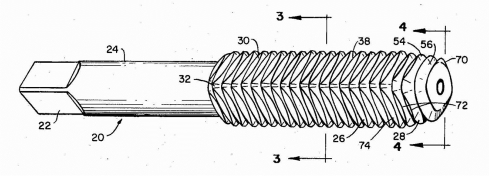
B23G5/18B4B Combined thread mill, chamfer tool and drill



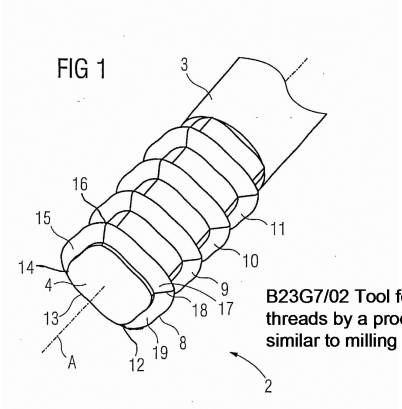
B23G5/18B4B & B23G1/32 Use of combined drilling, chamfering and thread milling tool



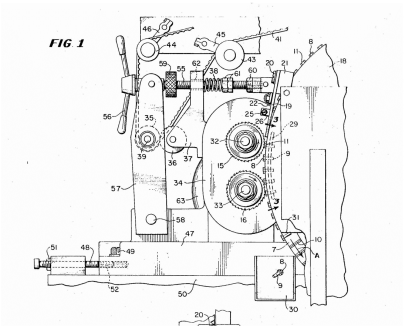
B23G5/20 Combined drill (110), tap (120) and chamfer milling (130) tool



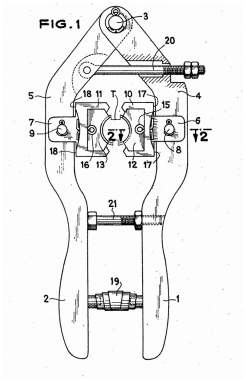
B23G7/02 Roll tap



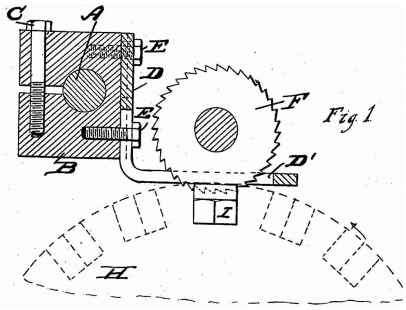
B23G7/02 Tool for forming threads by a procedure similar to milling



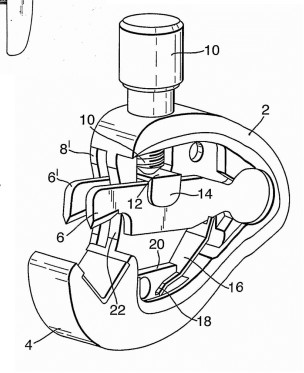
B23G9/00B2 Screw slotting machine.



B23G9/00B3 Thread deburring tool (also classed in B23G9/00D)



B23G9/00C2 Nut slotting tool.



B23B9/00D Thread repair device

B23G 1/00

Thread cutting; Automatic machines specially designed therefor

B23G 3/00

Arrangements or accessories for enabling machine tools not specially designed only for thread cutting to be used for this purpose, e.g. arrangements for reversing the working spindle

B23G 5/00

Thread-cutting tools; Die-heads

B23G 7/00

Forming thread by means of tools similar both in form and in manner of use to thread-cutting tools, but without removing any material (features of machines or devices not specially adapted to the particular mode of forming the thread B23G1/00)

B23G 9/00

Working screws, bolt heads, or nuts in conjunction with thread cutting, e.g. slotting screw heads or shanks, removing burrs from screw heads or shanks; Finishing, e.g. polishing, any screw-thread

B23G 11/00

Feeding or discharging mechanisms combined with, or arranged in, or specially adapted for use in connection with, thread-cutting machines (for machines tools in general B23Q)